

REMARKS

Applicants have amended claims 2-4 and 17 to correct typographical or grammatical errors and to enhance their clarity. Applicants submit that there is no narrowing of scope in any respect due to these amendments.

In reply to the outstanding Restriction Requirement, mailed July 2, 2002, in connection with the above application, Applicants hereby elect Group I (claims 1-2, 4-26, and 28-29) with traverse, for the reasons which follow.

First of all, Applicants respectfully submit that all three groups are closely related in nature. Although Groups I-II claims are directed to methods of either suppressing (Group I) or enhancing (Group II) the immune function, these two groups share common technical features. Indeed, Groups I-II claims are all based on regulating the steps of the *hedgehog-patched (ptc)* signal transduction pathway, despite the use of different agents (such as a *hedgehog* agonist or a *hedgehog* antagonist). Accordingly, a search covering the subject matter of Group I claims necessarily would cover the subject matter of Group II claims. Thus, Applicants submit that the inventions of Groups I and II can be efficiently searched and examined together without placing a significant additional burden on the examiner, and that the relevant art for both groups can be found in the same classes because both Groups I and II belong to class 514 and subclass 2.

In addition, Applicants respectfully point out that Groups I and II are encompassed by generic claim 1, and, pursuant to MPEP 809, restriction must be withdrawn upon indication of an allowable generic claim.

Furthermore, Group III contains only one claim (claim 27) directed to therapeutic preparations used in the methods of Groups I-II. Applicants submit that Group III can be searched simultaneously with Groups I-II without imposing a substantial additional burden on the Examiner. Based on these reasons, Applicants respectfully request that the restriction requirement, at least with respect to Groups I and II, be withdrawn.

In response to the species restriction requirement, Applicants hereby elect, with traverse, and for search purposes only, the following species: 1) SEQ ID No. 15 (one species from the hedgehog amino acid sequence group); 2) myristoyl (one species from the fatty acid moiety

group); 3) benzene (one species from the aromatic hydrocarbon group); 4) 8-bromo-cAMP (one species from the PKA inhibitor group).

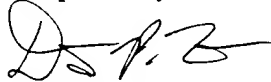
As to the species election requirement 2), 3), and 4), Applicants submit that species subjected to election are encompassed by Markush groups. Pursuant to MPEP 803.02, "If the members of the Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the examiner must examine all claims on the merits, even though they are directed to independent and distinct inventions." In addition, Applicants respectfully point out that the search of the Markush-type claim will be extended to non-elected species should no prior art be found that anticipates or renders obvious the elected species (MPEP 803.02).

The Examiner may address any questions raised by this submission to the undersigned at 617-951-7000. Should an extension of time be required, Applicants hereby petition for same and request that the extension fee and any other fee required for timely consideration of this submission be charged to **Deposit Account No. 18-1945**.

Date: August 2, 2002

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Respectfully Submitted,



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